(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International publication date 17 February 2005 (17.02.3005)

PCT

(10) International publication number

WO 2005/015959 A1

(51) International patent classification⁷:

H05B 33/14

(21) International application number:

PCT/DE2004/001775

(22) International filing date:

4 August 2004 (04.08.2004)

(25) Language of filing:

German

(26) Language of publication:

German

(30) Data relating to the priority:

103 36 531.1 103 39 629.2 5 August 2003 (05.08.2003) 28 August 2003 (28.08.2003) DE DE

(71) Applicant (for all designated States except US): TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG CAROLO-WILHELMINA [DE/DE]; Pockelsstrasse 14, 38106 Brunswick (DE).

(72) Inventors: and

(75) Inventors/Applicants (US only): DOBBERTIN, Thomas [DE/DE]; Maschplatz 3, 38114 Brunswick (DE).

KOWALSKY, Wolfgang [DE/DE]; Dorothea-Erxleben-Strasse 41 b, 38116 Brunswick (DE). JOHANNES, Hans-Hermann [DE/DE]; Mörickestrasse 10, 38124 Brunswick (DE). BECKER, Eike [DE/DE]; Ützenkamp 1, 38118 Brunswick (DE).

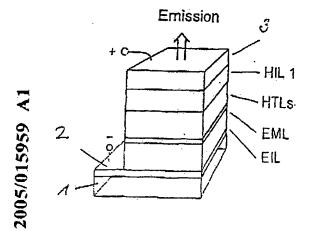
- (74) Attorney: LINS, Edgar; Gramm, Lins & Partner GbR, Theodor-Heuss-Str. 1, 38122 Brunswick (DE).
- (81) Designated states (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[continued on next page]

As printed

(54) Title: USE OF A LAYER CONSISTING OF HYDROPHOBIC, LINEAR OR TWO-DIMENSIONAL POLYCYCLIC AROMATICS AS A BARRIER LAYER OR AN ENCAPSULATION AND ELECTRIC COMPONENTS CONSTRUCTED WITH A LAYER OF THIS TYPE AND COMPRISING ORGANIC POLYMERS

(54) Bezeichnung: VERWENDUNG EINER SCHICHT AUS HYDROPHOBEN, LINEAR ODER ZWEIDIMENSIONAL POLYZYKLISCHEN AROMAITEN ALS SPERRSCHICHT ODER KAPSELUNG UND MIT HINER DER ARTIGEN SCHICHT AUFGEBAUTE FLEKTRISCHE BAUELEMENTE MIT ORGANISCHEN POLYMEREN



(57) Abstract: The invention relates to an electric component constructed with organic layers and comprising a layer consisting of a hydrophobic, linear or two-dimensional polycyclic aromatic with between 3 and 12 ring structures, including phthatocyanines containing metal or devoid of metal, which have -H and/or -P, alkyl groups, anyl groups and/or finorinated hydrocarbons as residual groups, said layer being used as a barrier layer or an encapsulation. This permits in particular hybrid constructions consisting of SM layers and polymer layers to be obtained. In addition, a retreactive encapsulation of the component is no longer required.

(57) Zusammenfassung: Für ein mit organischen Schichten aufgebautes elektrisches Baueleauent wird eine Schicht aus einem hydrophoben, linear oder zweidimensional polyzyklischen Aromaten mit 3 bis 12 Ringstrukturen, einschließlich metallhaltigen oder metallfreien Phthalocyaninen, die als Restgruppen -H

und/oder -F. Alkylgruppen, Arylgruppen und/oder fluoriene Kohlenwasserstoffe aufweisen, als Sperrschicht oder Verkapselung verwendet. Dadurch sind insbesondere Hybridaufbauen aus SM Schichten und Polymerschichten möglich. Ferner kann eine nachträgliche Verkapselung des Bauelements entfallen.

量

(84) Designated states (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC,

VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG.)

 of inventorship (Rule 4.17(iv)) for the following designation US

Published

- With International Search Report.
- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For an explanation of the two-letter codes and the other abbreviations, reference is made to the explanations ("Guidance Notes on Codes and Abbreviations") at the beginning of each regular edition of the PCT Gazette.